For Debate . . .

Caucasian

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The term Caucasian, used to denote "white Europeans," is creeping into British medical publications. As most white Europeans originate geographically from nowhere near the Caucasus mountains, the use of the term must perplex many and irritate quite a few. The term has been largely abandoned by anthropologists,[1] but it has been used until recently by immigration and prison officials in the United States of America and is still used in American medical publications. In any clinical or epidemiological context it may be as important to record a person's ethnic origin as, for example, his occupation. Fourteen per cent of the population of the United States is now non-white,[2] and some form of racial designation is often necessary. In British medical writing a person was assumed to be Caucasian, unless otherwise stated, until the mid-twentieth century. Since then the influx to the United Kingdom of persons of African, Indian, Chinese, and other antecedents has now raised the proportion of non-whites to 5%.[3] Hence the intrusion of the term Caucasian into our medical writing. Is this a suitable epithet and, if not, what are the alternatives? And anyway, why Caucasian? What follows has been conceived in a medical context and may not tally with current practice in anthropology or sociology.

Origin of the term

Geographical exploration by Europeans in the eighteenth century led to recognition of the physical differences that exist between widely separated populations. Various classifications of these differences were proposed, and that of Blumenbach was widely accepted. Johann Friedrich Blumenbach (1752-1840) (fig 1), professor of medicine at Göttingen, was one of the founding fathers of physical anthropology. He recognised that plants and animals were capable of becoming modified in form as a result of environmental changes. He believed that variations (*degeneratio*) were derived from a primary variety (*varietas primigenia*),[4] and that the races of mankind had thus been derived from the "white European" variety which he called *Caucasiana*. He published his classification of the races of mankind in *De Generis Humani Varietate Nativa Liber* in 1776, and it was in the third edition (1795) of this work that he described the five varieties as Caucasian, Mongolian, Ethiopian—that is, African—American, and Malay.[5] The English translation by Bendyshe gives his reason as follows: "I have taken the name of this variety from Mount Caucasus, both because its neighbourhood, and especially its southern slope, produces the most beautiful race of men, I mean the Georgian; and because all physiological reasons converge to this, that in that region, if anywhere, it seems we ought with the greatest probability to place the autochthones of mankind. For in the first place, that stock displays, as we have seen the most beautiful form of the skull (fig 2), from which, as from a mean and primeval type, the others diverge by most easy gradations on both sides to the two most ultimate extremes (that is, on the one side the Mongolian, on the other the Ethiopian). Besides, it is white in colour, which we may fairly assume to have been the primitive colour of mankind. . . ."[6]

FIG 1—Portrait of Johann Friedrich Blumenbach (1752-1840).
Courtesy of the Wellcome Institute Library, London.

Blumenbach travelled little but was obviously influenced by those of his contemporaries who had. He quotes Chardin thus: "The blood of Georgia is the best . . . perhaps in the world. I have not observed a single ugly face in that country. . . . Nature has lavished upon the women beauties which are not to be seen elsewhere. I consider it to be impossible to look at them without loving them." It is on the flimsy basis of the subjective responses of these eighteenth century anthropologists that the ethnic term Caucasian stands. It is easy, in the light of present day knowledge, to smile at such naive speculations, but these must be seen in historical perspective. Nevertheless, Blumenbach

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made many valuable observations in the specialties of anthropology, physiology, and comparative anatomy, and he was rightly respected in his time. This may account for the persistence of the term Caucasian despite the fact that no one now seriously suggests that all white Europeans are derived from the Georgians of the Caucasus.

Taxonomy

Geographical exploration during the late eighteenth, the nineteenth, and the early twentieth centuries led to the discovery of ever more varieties of the human species, and close study of these and of previously known races with respect to skeletal measurement, skin pigmentation, shape of nose, hair coil, and

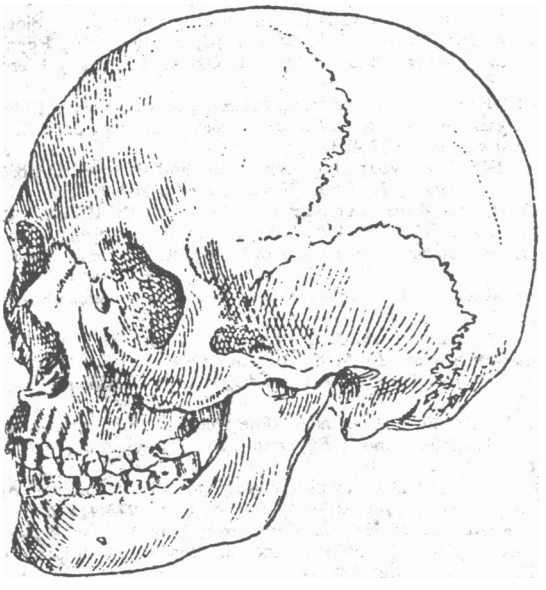

FIG 2—*Feminae Georgianae.*
Plate IV, figure 3 in Blumenbach's *De Generis Humani Varietate* (1766), taken from the reproduction in the English translation by T Bendyshe (1865) (ref 5).
"As a specimen I have given a most beautiful skull of a Georgian female . . . beautifully symmetrical, somewhat globular; the forehead moderately expanded, the malar bones somewhat narrow, nowhere projecting. . . ."

other anthropometric features in turn led to complex and detailed classifications.[7-9] A geographical gradient of certain characteristics (cline) between adjacent populations may render any rigid taxonomical subdivisions merely arbitrary. Chemical and molecular analysis of proteins has shown that racial classifications do not match well with most patterns of gene frequencies in human populations. Modern physical anthropology has greatly reduced its earlier emphasis on "racial" classification based on external appearance and general morphology. In an article entitled "How different are human races?" J S Jones writes: "The geographical trends of gene frequency for a sample of human polymorphisms hardly ever parallel those for skin colour or body form. . . . Only about ten per cent of the total biological diversity of mankind arises from genetic divergence between 'racial' groups."[10]

Race and disease

Where do we stand in the context of the clinical and epidemiological need for the determination of race? It is well known that there are geographical-racial variations in the prevalence of certain genetic biochemical differences that are clinically important. This is manifested in certain diseases and in the response to drugs in the treatment of diseases that may not themselves be genetically determined. For example, the abnormal haemoglobin, which is due to the sickle cell gene, is probably responsible for more adult illness and infant deaths than any other inherited disease. It is found in up to about a quarter of the negro population in an east to west belt across central Africa[11] and in many descendants of African origin living elsewhere. Haemoglobin C causes a similar but less severe illness, mainly in Upper Volta and Ghana[12]; haemoglobin E does likewise in Thailand. Thalassaemia affects children in a geographical band across the Mediterranean, Middle East, and Indo-China.[13] Adult intestinal hypolactasia is present in over 90% of Japanese, Chinese, Thais, Amerinds, and some African tribes, whereas it is present in 12% of the population of north west Europe and in less than 4% of Scandinavians.[14] Phenylketonuria is rare in negroes and Japanese, virtually absent in Ashkenazi Jews, yet fairly common in oriental Jews.[15] Tay-Sachs disease and essential pentosuria are almost confined to Ashkenazi Jews.[15]

Knowledge of a patient's ethnic origin may also be important in the treatment of disease. Glucose-6-phosphate dehydrogenase deficiency in the red cells, which is prevalent in Greece, Sardinia, the Middle East, and India,[16] may be complicated by severe haemolysis after ingestion of certain drugs—various antimalarials, sulphonamides, sulphones, and nitrofurans.[17] The rate of inactivation of drugs by acetylation depends on whether the patient is a "fast" or "slow" acetylator.[18] Slow acetylators are at greater risk of side effects when taking isoniazid, phenelzine, sulphonamides, hydralazine, or dapsone.[19] Slow acetylator state predominates in Egyptians[20] and Ethiopians (83%),[21] is present in about half of Europeans, but is uncommon in Japanese and Amerinds and rare in Canadian Eskimos.[22] Enough has been said to show the desirability of establishing a patient's ethnic origin both for diagnosis and treatment. This not only applies to conditions in which a connection is recognised, but also, doubtless, will apply to as yet undiscovered disorders and variations in response to drugs. "Consideration of ethnically determined differences in drug metabolism highlights the potential dangers of extrapolating research data generated in one racial group and applying it to another."[23]

Naming the races

What designations should be used in clinical and epidemiological contexts? In epidemiological studies there may be time for elaborate methods of identifying gene frequencies, but in the hurly burly of clinical practice there is no time, and we may be forced to depend on the five (or so) traditional nineteenth century racial groups.

The naming of races is bedevilled by emotional overtones. Pejorative implications in a designation lead to a change or series of changes in that designation. As Jules Feiffer, the cartoonist, has put it: "As a matter of racial pride we want to be called 'blacks,' which has replaced Afro-American, which has replaced negroes, which has replaced coloured people, which has replaced darkies, which has replaced blacks."[24] What is needed is a name that cannot easily be contaminated by derogatory implication and the meaning of which is clear and self evident. This is best done on a geographical basis. Accordingly, Blumenbach's choice of Caucasian for the "white European" race is inappropriate and should be abandoned. It might be argued that, as all concerned know what Caucasian means, a change is unnecessary and that a name does not need to be descriptive of origin or condition. After all, no one now believes that influenza is caused by astral influence, or that malaria is due to bad air. This argument does not hold for Caucasian. Because race is primarily based on geographical location racial designations should not be such as to risk confusion with unrelated geographical names. D M Lang writes: "In view of widespread misconceptions, a word must be said

about the term 'Caucasian' itself. Certain physical anthropologists who should know better, and also American immigration authorities who cannot be expected to do so, habitually use this word to denote anyone who is not a Negro, Indian, Chinese—in fact, as the virtual opposite of 'coloured.' . . . This is utterly unscientific, and a complete misnomer. The Anglo-Saxons, Latins, Slavs and others to whom the term is so loosely applied have absolutely no historical or ethnic connection with the Caucasian peoples proper."[25]

Let us see what our European colleagues do. The *Grand Larousse* says, "se disait autrefois" (was formerly used). *Trésor de la Langue Française* says, "vieilli" (obsolescent). *Dizionario Enciclopedico Italiano* says, "termine usato talora, sopratutto in passato" (term used sometimes, especially in the past). *Grande Dizionario della Lingua Italiana* says, "oggi non più usato dagli scienziati" (no longer used nowadays by scientists). A Swiss colleague said that he had seen the term used in French and German papers in recent years, but solely by authors who had been extensively exposed to American publications. There can be no serious doubt that the use of Caucasian in British medical publications has been imported from America. I imagine that Blumenbach's term was adopted in the United States because it was thought to be "scientific" and therefore less amenable to ideological or emotional manipulation.

If we are to reject Caucasian as a term to denote the "white European" race, as I think we should, what are the alternatives? By what criteria should a term be assessed? It seems to me that any term used to designate a racial stock should be characterised by the following: (*a*) a geographical basis derived from the place of origin, (*b*) an absence of alternative meanings, (*c*) a single word, and (*d*) a self evident meaning. Let us now look critically at some terms in current use in the light of these criteria.

Caucasian—geographically wrong except for a few races comprising Georgians, Circassians, Kabardians, Abkhazians, Avars, Lezghians, and others inhabiting the Caucasus.[25]

European geographical race[26]—explicit but unwieldy.

European[27]—excludes those living in other continents.

Caucasoid[7 26 28]—(en suite with negroid, mongoloid, australoid, etc) much favoured by American anthropologists. It retains the fallacious Caucasian implication. The suffix -oid (Greek eidos; form, shape, resemblance) also implies a resemblance to some definitive concept, as in mastoid or thyroid, and it is inapplicable here.

White—much used in English speaking countries. There are varying degrees of skin pigmentation in Caucasians. Compare the loose usage of "white" in respect of coffee and wine.

Europid—(en suite with negrid, mongolid, australid, etc) adopted by Baker[29] after its introduction by Peters.[30] The suffix -id is stated to be a truncation of the Greek -ides, of the family of.

"Europid," which will be unfamiliar to most readers, does fulfil the above mentioned criteria. Its use in a medical journal might initially evoke more letters of complaint than the use of Caucasian does now. I believe that, with repeated usage under authoritative aegis, familiarity would achieve acceptance.

Whatever term is adopted it is unlikely to receive immediate and widespread approval. Analogous dilemmas will confront the keepers of editorial style books with respect to Asian, Mongoloid, and so forth. Persons of racially mixed origin present further terminological problems. These difficulties will have to be faced. Authoritative editorial persuasion and influence should provide solutions. A conference of influential medical editors might achieve a consensus and impose an acceptable style.

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A woman of 23 has a sister aged 30 whose 1 year old child has cystic fibrosis. Her second pregnancy has been terminated. There is no history of this disorder in either the parents of the sibling and patient or in the parents of father of the affected child. What is the genetic risk to the woman, who is unmarried and fit?

The mother of the child with cystic fibrosis must be a carrier for this recessively inherited condition. Her sister (the woman who is seeking advice) has 1/2 a chance of carrying the gene. The likelihood that she marries a carrier in the general population, provided that she does not marry a cousin, is about 1 in 22. The final risk of her having an affected child is $1/2 \times 1$ in 22×1 in $4 = 1/176$—a reassuringly small risk.—M BARAITSER, consultant clinical geneticist, London.